

**UNITED STATES DISTRICT COURT
DISTRICT OF NEW JERSEY
TRENTON VICINAGE**

ASSOCIATION OF NEW JERSEY RIFLE
& PISTOL CLUBS, INC., BLAKE
ELLMAN, and MARC WEINBERG,

Plaintiffs,

v.

MATTHEW PLATKIN, in his official
capacity as Attorney General of New Jersey,
PATRICK J. CALLAHAN, in his official
capacity as Superintendent of the New
Jersey Division of State Police,
RYAN MCNAMEE, in his official capacity
as Chief of Police of the Chester Police
Department, and
JOSEPH MADDEN, in his official capacity
as Chief of Police of the Park Ridge Police
Department,

Defendants.

HON. PETER G. SHERIDAN

Civil Action No.
3:18-cv-10507

MARK CHEESEMAN, TIMOTHY
CONNELLY, and FIREARMS
POLICY COALITION, INC.,

Plaintiffs,

v.

MATTHEW J. PLATKIN, in his
official capacity as Acting Attorney
General of New Jersey, PATRICK J.
CALLAHAN, in his official capacity
as Superintendent of the New Jersey

HON. RENEE M. BUMB

Civil Action No.
1:22-cv-4360

State Police, CHRISTINE A. HOFFMAN, in her official capacity as Acting Gloucester County Prosecutor, and BRADLEY D. BILLHIMER, in his official capacity as Ocean County Prosecutor,

Defendants.

BLAKE ELLMAN, THOMAS R. ROGERS, and ASSOCIATION OF NEW JERSEY RIFLE & PISTOL CLUBS, INC.,

Plaintiffs,

v.

MATTHEW J. PLATKIN, in his official capacity as Attorney General of New Jersey, PATRICK J. CALLAHAN, in his official capacity as Superintendent of the New Jersey Division of State Police, LT. RYAN MCNAMEE, in his official capacity as Officer in Charge of the Chester Police Department, and KENNETH BROWN, JR., in his official capacity as Chief of the Wall Township Police Department,

Defendants.

HON. PETER G. SHERIDAN

Civil Action No.
3:22-cv-04397

**STATE DEFENDANTS' COUNTER-STATEMENT OF
MATERIAL FACTS NOT IN DISPUTE**

Pursuant to Federal Rules of Civil Procedure 56 and D.N.J. Local Rule 56.1, State Defendants submit the following Statement of Material Facts Not in Dispute.

1. New Jersey enacted its assault firearms prohibition in 1990. P.L. 1990, Ch. 32.
2. That law was enacted after a mass shooting in Stockton, California when a man armed with an AK-47 and a handgun killed five children and wounded thirty-three others at an elementary school. Decl. of Daniel Vannella Ex. 4, Rpt. of Professor Robert Spitzer ¶ 1.¹
3. New Jersey Governor Jim Florio's bill signing statement for Public Law 1990 discussed the capacity of the prohibited firearms to cause mass destruction and pose a threat to police, citizens, and children. Vannella Decl. Ex. 42.
4. In 2018, New Jersey enacted P.L. 2018, Chapter 39, which revised the definition of an unlawful "large capacity ammunition magazine" from 15 to 10 rounds of capacity.
5. N.J. Stat. Ann. § 2C:39-1(w) regulates only a specific subset of handguns, rifles, and shotguns. Vannella Decl. Ex. 11, Rpt. of James Yurgeleatis ¶¶ 8-26.
6. N.J. Stat. Ann. § 2C:39-1(y) does not limit how many magazines an individual may possess.

¹ For ease of reference, the following lists frequently cited expert reports and their corresponding exhibits within the Vannella Declaration:

Ex. 3: Rpt. of Professor Saul Cornell
Ex. 4: Rpt. of Professor Robert Spitzer
Ex. 5: Rpt. of Professor Randolph Roth
Ex. 6: Rpt. of Professor Denis Baron
Ex. 7: Rpt. of Lucy Allen
Ex. 8: Rpt. of Dr. Stephen Hargarten
Ex. 9: Rpt. of Professor Louis Klarevas
Ex. 10: Rpt. of Professor Daniel Webster
Ex. 11: Rpt. of James Yurgealitis
Ex. 12: Rpt. of Professor Brian DeLay

7. Fourteen states plus the District of Columbia restrict large-capacity magazines, representing more than 115 million people, or approximately 34.5% of the U.S. population. Spitzer Rpt. ¶¶ 2, 56.
8. Ten states plus the District of Columbia have enacted assault weapons and large-capacity magazine bans, as have various localities around the country, representing approximately 109 million people, or 32.7% of the U.S. population. Spitzer Rpt. ¶ 2.
9. Semi-automatic rifles and pistols which are designed to function with detachable magazines will still function as intended regardless of the capacity of the magazine a user inserts into the firearm. Numerous manufacturers sell semi-automatic pistols packaged with detachable magazines ranging in size from 7 rounds to 15 rounds. Yurgealitis Rpt. ¶¶ 131–134.
10. “Any firearm designed to accept a detachable magazine holding more than 10 rounds will also accept a magazine with a maximum capacity” of less than 10 rounds. Yurgealitis Rpt. ¶ 145. Thus an AR-15 style rifle “will function as designed whether the operator utilizes a magazine limited to 10 rounds or one of greater capacity.” Yurgealitis Rpt. ¶ 145.
11. Each of the features listed in N.J. Stat. Ann. 2C:39-1(w)(2) and the 1996 Attorney General Guidelines, whether incorporated into the firearm by the manufacturer as standard equipment or subsequently added by the owner as an accessory, can generally be considered capable of increasing the firearm’s effectiveness in a combat scenario:
 - i. A pistol grip or thumbhole stock (for rifles and shotguns);
 - ii. Forward handgrip (rifles, shotguns, and pistols);
 - iii. Folding/telescoping stocks (rifles and shotguns);
 - iv. Flash suppressors;
 - v. Grenade launchers;
 - vi. Barrel shroud;
 - vii. Threaded barrel;
 - viii. Buffer tube, arm brace, or the like;
 - ix. “Bump stocks”

Yurgealitis Rpt. ¶¶ 117–130.

History Of Firearms Technology

12. Single-shot, muzzle-loading firearms were the ubiquitous guns from the time of America's initial settlement by Europeans until the latter part of the 19th Century. Spitzer Rpt. ¶¶ 30, 40; Vannella Decl. Ex. 12, Rpt. of Professor Brian DeLay ¶ 34; Rpt. of Professor Saul Cornell at 24. These were slow-loading guns that had to be loaded with gunpowder and ball before every shot, and could not be kept loaded without corroding the iron barrels. DeLay Rpt. ¶ 37; Cornell Rpt. at 24. Moreover, the black powder used in these weapons was both corrosive and attracted moisture like a sponge. Cornell Rpt. at 18. These weapons were thus limited as practical tools for self-defense. Cornell Rpt. at 18.
13. Repeat fire was difficult to achieve with colonial-era muzzle loading firearms, and they were known to be inaccurate at range. DeLay Rpt. ¶¶ 37, 61.
14. Muzzle loading firearms could not be loaded while lying prone, such that soldiers became an easier target during combat when they rose to reload. DeLay Rpt. ¶ 61.
15. The average 18th Century soldier fired two or three shots a minute from a smoothbore musket. DeLay Rpt. ¶ 16.
16. Multi-shot firearms were not common, ordinary, or found in general circulation during the Colonial and Founding eras. Spitzer Rpt. ¶ 30. Repeating firearms did not pose a threat to public safety in 1791. DeLay Rpt. ¶ 49.
17. Repeating arms were experimental, flawed curiosities at the times of the Founding and ratification of the Fourteenth Amendment, and were rare in the United States during those eras. DeLay Rpt. ¶¶ 5, 8, 13, 51. No repeating firearm achieved military or commercial significance before the 19th Century. DeLay Rpt. ¶¶ 8, 14.
18. 18th Century repeaters were unreliable and prone to misfiring. DeLay Rpt. ¶ 14.
19. Early repeaters that used the superposed firing method were slow to load and could explode in the user's hands if the sequencing between rounds was off. They also produced clouds of white smoke from the gunpowder when fired. DeLay Rpt. ¶ 15.

20. The Puckle gun, an 18th Century repeater, was a military weapon, was not a self-loading or hand-held firearm, and was not manufactured for commercial sale. Spitzer Rpt. ¶¶ 31-32; DeLay Rpt. ¶ 16.
21. The 18th Century Belton repeater was neither proven feasible nor produced for distribution. It used the superposed firing method. Spitzer Rpt. ¶¶ 33-34; DeLay Rpt. ¶ 24.
22. Only a few hundred of the 19th Century Jennings multi-shot rifle were manufactured. This gun used the superposed firing method. Spitzer Rpt. ¶ 35; DeLay Rpt. ¶ 53.
23. The 18th Century Girandoni air rifle required 1500 strokes to restore power after its reservoirs were empty, making it impractical for civilian use. These air guns were complex and expensive to make and repair, and therefore were rare in 18th and early 19th Century America. Spitzer Rpt. ¶ 36; DeLay Rpt. ¶¶ 28-29, 32; Cornell Rpt. at 28. Indeed, the Austrian military, one of the few armed forces to purchase this weapon, quickly abandoned it. Cornell Rpt. at 28.
24. The repeating pistols produced by the Volcanic Repeating Arms Company in the 19th Century were few, flawed, and experimental. Spitzer Rpt. ¶ 37.
25. The guns advertised by Samuel Miller and James Pim in the early 1700s were not offered for sale, used for self-defense, or employed in combat. DeLay Rpt. ¶ 20.
26. The gun advertised by John Cookson in the early 1700s was for a single weapon. There is no evidence that Cookson continued to make or sell that firearm. DeLay Rpt. ¶ 21.
27. The Continental Congress cancelled its order for 100 of Joseph Belton's gun in the 1770s. There is no evidence that Belton ever produced that gun in quantity. DeLay Rpt. ¶ 23-24; Spitzer Rpt. ¶ 33-34.
28. The U.S. Navy purchased several hundred Chambers repeaters, which utilized the superposed load technology, but there is no evidence that the guns were put to use or produced for commercial sale. DeLay Rpt. ¶ 52.
29. The market for firearms in early America shared very few features with the contemporary world of firearms commerce. Cornell Rpt. at 22.

30. In the early 1800s, the government took an active role in encouraging the manufacture of arms, and it had a vested interest in what types of weapons would be produced. The American firearms industry, then in its infancy, was thus largely dependent on government contracts and subsidies. Cornell Rpt. at 20.
31. Early American firearms production in the era of the Second Amendment was dominated by artisan production, while local gun smiths—not big box stores like Walmart—sold most firearms. Most households, apart from the wealthiest ones, could not afford to own multiple weapons. Cornell Rpt. at 22.
32. The vast majority of the repeating pistols that entered the market in the 1830s (i.e., pepperbox pistols and revolvers) held seven or fewer rounds. Only three 19th Century revolvers had greater than ten-round capacity, and only a few hundred of those were produced. DeLay Rpt. ¶ 58.
33. Mid-19th Century repeating pistols had to be manually reloaded when empty. It could take at least one minute to complete the reloading process. DeLay Rpt. ¶ 59. This limited the damage a single shooter could inflict on a group of people. DeLay Rpt. ¶ 69.
34. The Colt revolver was designed as a six-shot weapon and did not circulate widely in society until after the Civil War. Spitzer Rpt. ¶ 41.
35. The Henry and Winchester repeating firearms were the only reliable firearms that could fire more than ten rounds in the years surrounding the ratification of the Fourteenth Amendment. DeLay Rpt. ¶ 64. Most of those weapons produced between 1861 and 1871 were purchased by the military or exported abroad. DeLay Rpt. ¶ 65; Spitzer Rpt. ¶ 42. Overall, large-capacity firearms constituted less than 0.02% of all firearms in the United States as late as 1872. Vannella Decl. Ex. 12, Correction to Rebuttal Report of Professor Brian DeLay ¶¶ 1-2.
36. The Winchester firearms in the last third of the 19th Century were fixed magazine, lever-action rifles that required the shooter to manipulate a lever in a forward-and-back motion before each shot in order to eject a spent casing and chamber a new round. When the magazine was empty, it had to be manually reloaded round by round. Spitzer Rpt. ¶ 42; DeLay Rpt. ¶¶ 69, 75.
37. Both automatic and semi-automatic weapons use energy released by the first round fired to load the next round into the firing chamber. Both are capable of firing numerous rounds without reloading, potentially with the use of

detachable ammunition magazines or similar feeding devices. Spitzer Rpt. ¶¶ 21, 23; DeLay Rpt. ¶ 75. Automatic arms continue to fire as long as the trigger is depressed, while semiautomatic arms require the shooter to squeeze the trigger for each round fired. DeLay Rpt. ¶ 76.

38. Detachable magazines first emerged in the 1880s and began to be integrated into firearms for the consumer market by the end of the century. These drastically accelerated the process to load and reload a firearm by making it possible to load an entire magazine at once, rather than bullet-by-bullet. DeLay Rpt. ¶ 79.
39. Semi- and fully automatic firearm technology was developed in the 1880s and did not become reliable or widely available until the beginning of the 20th Century. The primary market was the military. Spitzer Rpt. ¶ 38; DeLay Rpt. ¶¶ 6; 76. When this dramatic technological change provoked unprecedented social concern, it led to a wave of regulatory legislation across the country. DeLay Rpt. ¶ 6.
40. The firearms and firearm feeding devices regulated in the early 20th Century, unlike those from previous centuries, were capable of reliable, rapid fire utilizing interchangeable ammunition feeding devices. Spitzer Rpt. ¶ 29.
41. Early precursors to modern semi-automatic and automatic firearms were military weapons designed to be used in combat and fired from a tripod or similar supporting apparatus due to their large size and weight, such as the Gatling gun. Because their use and suitability were limited to military settings, there was no need to regulate these weapons among the civilian population. Spitzer Rpt. ¶ 5.
42. Fully automatic machine guns, capable of firing all of their rounds from a single barrel and with a single trigger pull, were developed during World War I. These weapons, such as the Thompson submachine gun (“Tommy gun”) and Browning Automatic Rifle (“BAR”), were developed as military weapons but were made available to civilians after the war. It was not until the early 1920s that these hand-held, fully automatic weapons operated reliably, were available to civilians, and began to circulate in society. Spitzer Rpt. ¶¶ 5, 6, 8; DeLay Rpt. ¶ 81.
43. After 1930, commercial sales of the Tommy gun were discontinued except to the military and law enforcement due to concerns about criminal use of the firearm. Spitzer Rpt. ¶ 7.

History and Development of Assault Rifles and LCMs

44. Rapid-fire semiautomatic weapons that accept magazines capable of holding more than 10 rounds, such as the AR-15, are derived from technologies developed for military use. Roth Rpt. ¶¶ 58-59. Many of the assault weapons available for purchase by the public are near identical copies of military firearms, save for the lack of select fire capability. Yurgealitis Rpt. ¶ 112. The only difference between the Colt-produced military and civilian versions of the AR-15 / M-16 was removal of select fire capability and relocation of assembly/disassembly pins in the lower receiver as stated previously. Yurgealitis Rpt. ¶ 72.
45. The first “assault rifle” or “assault weapon,” which arose during World War II, was the German StG 44. The features of the German StG 44 were intended, in part, to increase the effectiveness of the individual soldier by enabling more rapid fire, increasing the amount of ammunition an individual combatant could carry, and allowing more rapid re-loading. Yurgealitis Rpt. ¶¶ 40-44. These features were also utilized in the German MP40, and by the United States’s M3 “Greasegun” in World War II. Yurgealitis Rpt. ¶¶ 64-65. Many of these features were also utilized in the design and manufacture of mid-20th Century submachine guns. Yurgealitis Rpt. ¶ 64.
46. In 1947, after the end of World War II, the USSR developed what one firearm expert and historian termed “the quintessential assault rifle – the Kalashnikov designed AK-47.” The AK-47 adopted several features from the German StG 44. Yurgealitis Rpt. ¶¶ 50-51.
47. Other countries followed suit and developed military rifles that incorporated these same features to some extent. Yurgealitis Rpt. ¶ 52. In the United States, for instance, Eugene Stoner developed a number of lightweight assault rifle designs that resulted in the AR-10 (.308 caliber) with features that are now commonplace in the standard assault rifle design: light weight, separate pistol grip and shoulder stock, foregrip/barrel shroud, detachable magazine, and numerous flash hider/muzzle brake variations. Yurgealitis Rpt. ¶ 55.
48. In 1961, the United States Department of Defense purchased a quantity of AR-15 rifles, which followed the original AR-10. The Department tested those AR-15 rifles in Vietnam and issued a report summarizing their field evaluation. Comments in that report describe “catastrophic injuries” to combatants shot by AR-15 rifles, including “severing of limbs and decapitation.” Yurgealitis Rpt.

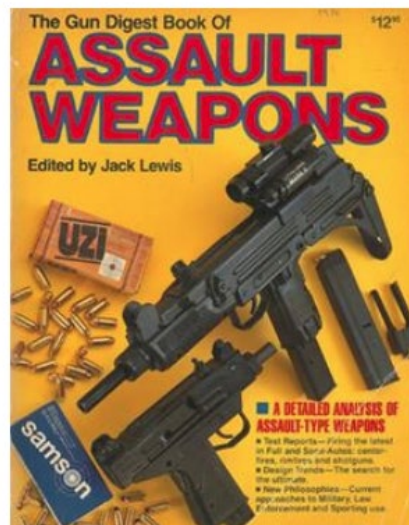
¶ 56. By the mid 1960's, the U.S. Army adopted the AR-15 as standard issue and renamed the M-16. Yurgealitis Rpt. ¶¶ 56-57.

49. In the 1950's and 1960's, assault rifles proliferated and civilian version of these weapons were developed. These civilian versions, including the Colt AR-15, retained the performance capacities of the military weapons off which they were based, including the effective range, muzzle velocity, and semiautomatic range of fire. Their "basic configuration, appearance, construction and operation" remained "unchanged." Yurgealitis Rpt. ¶¶ 71-73.

50. These civilian versions also retained the capability to accommodate large-capacity magazines of more than ten rounds. Yurgealitis Rpt. ¶ 73.

51. Over time, these weapons have remained largely consistent. For instance, there are multiple internal parts that are completely interchangeable between military weapons that Colt manufactured in the 1960's and an AR-15 today. Yurgealitis Rpt. ¶ 74. The same goes for internal AK operating parts and assemblies. Yurgealitis Rpt. ¶ 81.

52. The term "assault weapon" entered common use in the firearms community as early as 1986, as the below "Gun Digest Book of Assault Weapons," published that year, demonstrates:



Yurgealitis Rpt. ¶ 85.

53. The terms "assault weapon" and "assault rifle" originated in the firearms industry marketing in the 1980s. The use of military terminology, and the

weapons' military character and appearance, were key to marketing the guns to the public. Spitzer Rpt. ¶¶ 50-51.

54. The firearms industry has also promoted the similarities between semi-automatic versions of their full/select battle rifles for marketing purposes, as well as conversion capabilities with features like grenade launchers, as the below advertisement demonstrates:

Arm your men with confidence

**Colt's AR-15
Semi-Automatic
Rifle**



MODEL R-6000

- Lightweight
- Easy to handle
- Straight line construction
- Weights only 6.3 pounds
- Extremely accurate
- Simple to maintain

Colt's answer to the law enforcement agencies' demands for a semi-automatic version of the M16 automatic rifle purchased by the United States Armed Forces. Pioneering engineering redesign efforts have resulted in government-approved conversion of the automatic military rifle to a semi-automatic police weapon without sacrificing any performance or weight characteristics.

Colt Industries  **Colt's Small Arms Division
Security Equipment**
100 Huxthope Avenue, Hartford, Conn. 06102

18



Yurgealitis Rpt. ¶ 88.

55. In 1990, following the passage of Federal and numerous State local Assault Weapon Bans, the firearm industry began to use the moniker "Modern Sporting Rifle" to describe semi-automatic variants of the fully automatic/select fire M-16. Yurgealitis Rpt. ¶ 90.

56. The lineage and refinement of large capacity detachable magazines and belt feeding mechanisms can be traced directly to a military heritage. Development and refinement of large capacity feeding devices for machine guns gained increased importance with the advent of World War I. Yurgealitis Rpt. ¶ 91.

57. The ability to fire an increased quantity of cartridges without reloading increases the lethality and effectiveness of small arms in combat, which is a feature of design intended for military use. Yurgealitis Rpt. ¶ 110.

58. After World War I, a number of advancements in arms technology and design facilitated practical semi-automatic rifles for standard issue. In World War II,

U.S. Forces where issued a rifle with eight-round internal magazine (the Springfield Armory M-1 “Garand” rifle). The United States also deployed a .30 caliber M-1 with a fifteen-round detachable box magazine that was issued to support personnel behind the front lines. Yurgealitis Rpt. ¶ 95.

59. When the AR-15 (later the M-16) was issued to U.S. Forces in the 1960’s, it was issued with twenty-round detachable magazines. Yurgealitis Rpt. ¶ 96.
60. When the first semi-automatic variant became available for sale to the public in 1964, it only came with two five-round magazines. Yurgealitis Rpt. ¶ 97. This remained the case as late as 1987. Yurgealitis Rpt. ¶ 99.
61. Even as development of semi-automatic pistols continued after World War II, magazine capacities generally remained under ten rounds. Yurgealitis Rpt. ¶ 100.
62. By the late 1980’s, numerous domestic and foreign manufacturers began developing and offering numerous semi-automatic models with magazine capacities equaling or exceeding fifteen rounds. Yurgealitis Rpt. ¶ 101-102.
63. In 1994 Congress adopted the Federal Assault Weapons Ban, which limited the maximum capacity of a detachable magazine to ten rounds. Numerous firearm and aftermarket magazine manufacturers, in turn, initiated production of “post ban” magazines to conform to the new legislation. Magazines with a capacity of over ten rounds were termed “Large Capacity Magazines.” Yurgealitis Rpt. ¶ 103.
64. “Post ban” magazines were modified versions of existing large-capacity magazines to keep their dimensions identical and ensure that ten-round magazines functioned identically to “large capacity magazines.” Yurgealitis Rpt. ¶ 103.
65. Following the expiration of the Federal Assault Weapons Ban, numerous states and localities enacted their own legislation that also contained magazine-capacity limitations. In turn, many semi-automatic handgun manufacturers and rifles continued to offer “state compliant” versions to customers in affected states. Yurgealitis Rpt. ¶ 105.
66. Many aftermarket manufacturers, including Mec-Gar and ProMag, offer ten-round magazines specifically for use in handguns that come with large-capacity magazines. Yurgealitis Rpt. ¶ 109.

Assault Weapons and LCMs' Lethality

67. Assault firearms are not designed for traditional hunting purposes. Rather, the .223 caliber / 5.56 mm bullets fired from AR type rifles and pistols cause considerable tissue damage to their targets and are therefore counterintuitive choices for hunting. Yurgealitis Rpt. ¶ 153.
68. Assault firearms banned under New Jersey law were designed for military use, effective at battlefield ranges of up to 500 yards, and the design purpose of the .223 caliber bullet used in the AR-16 / M-16, it was intended to kill or incapacitate enemy combatants at distances of hundreds of yards, not dozens of feet. Yurgealitis Rpt. ¶ 137.
69. The AR-15 has approximately the same muzzle velocity as the M-16 (3,300 feet per second) and the same rate of fire as the M-16 on semiautomatic: 45 rounds per minute. Delay Rpt. ¶ 58.
70. More than 45,000 individuals die each year from gun-related injuries in the United States. Rpt. of Dr. Stephen Hargarten ¶ 11. Those who survive suffer from serious complications, lifelong disabilities, and psychological trauma. Hargarten Rpt. ¶¶ 11, 36.
71. The AR-15 was designed to chamber and fire a 5.56 x 45 mm cartridge. Yurgealitis Rpt. ¶ 55. This cartridge has a muzzle velocity of approximately 3200 feet per second, which is almost three times greater than the muzzle velocity of a 9mm pistol. Yurgealitis Rpt. ¶ 58. This velocity is sufficient to penetrate the soft body armor (Level II or Level IIIA) that most officers are issued. Yurgealitis Rpt. ¶ 6.
72. Once a 5.56mm bullet connects with tissue, it will “yaw”—rotate on its axis—creating temporary and permanent large wound cavities. Handgun bullets, by contrast, because they are heavier and travel at a lower velocity, do not typically “yaw” and do not create as large a wound cavity. Yurgealitis Rpt. ¶ 58. In part because of the significant damage that 5.56mm bullets create upon impact with living tissue, they are generally not favored as a hunting cartridge. Yurgealitis Rpt. ¶ 62.
73. A bullet damages a body by transferring kinetic energy to the target. Increases in the mass, velocity, and surface area of a bullet each increase the energy delivered to a target. Hargarten Rpt. ¶ 12.

74. A study by Hargarten 2022 showed that assault weapons can release more kinetic energy per minute than other kinds of firearms. Hargarten Rpt. ¶ 13. For instance, assault weapons release approximately three times more energy than a Thompson Machine Gun bullet, between four to nineteen times more energy than handguns, depending on the caliber, and ten times more energy than a musket. And the energy release can increase if the bullet fragments upon impact. Hargarten Rpt. ¶ 25; *see also id.* Ex. B.
75. In the Hargarten 2022 study, the size of the temporary cavity that assault-weapon bullets cause was significantly larger than what the Thompson Machine gun, handguns, and muskets cause. Hargarten Rpt. ¶¶ 13, 26; *see also id.* Ex. B. The AR-15 style bullet, with its kinetic energy release and its greater permanent and temporary cavities is more destructive than those fired by the Thompson Machine gun rifle and handguns. Hargarten Rpt. ¶ 28.
76. Assault weapons can cause extreme damage to the tissue and organs of shooting victims, leading to high fatality and complication rates in victims. Hargarten Rpt. ¶¶ 13, 32.
77. Assault weapons are also more likely to cause significant damage to bones, the skeletal structure, and critical solid organs like the liver and spleen. Damage to these organs, in turn, increases the risk of catastrophic bleeding. Hargarten Rpt. ¶ 32.
78. Assault weapons cause added damage when there are multiple bullet wounds. In this case, a victim's wounds are more complex, carry a higher likelihood of injury requiring surgical intervention, and increase the likelihood of death at the scene or upon arrival at an emergency department. Hargarten Rpt. ¶ 34.
79. Large capacity magazines increase this destructive potential by increasing the number of rounds someone can fire without having to reload, thereby increasing the number of bullets that can be fired during a given time period. Hargarten Rpt. ¶ 30.
80. Assault weapons are even more likely to cause serious injury or death for children due to children's smaller torsos, relatively more compressed/adjacent vital organs, and smaller blood reserves. Hargarten Rpt. ¶ 36.
81. In the Sandy Hook Elementary School shooting, not one child wounded by an assault-weapon bullet ultimately survived. Hargarten Rpt. ¶ 36.

History of Firearms Regulations

82. Weapons regulations in the United States have historically followed the same series of steps: First, a new gun or gun technology is invented. Second, it may then be patented. Third, it is often developed with a focus on military applications and needs, not directly for civilian acquisition or use. Fourth, some military-designed weapons may spread to, or be adapted to, civilian markets and use. Finally, if such weapons circulate sufficiently in society to pose a safety, violence, or criminological problem or threat, the government may implement gun policy/law changes. Spitzer Rpt. ¶¶ 27, 47.
83. The general progression of firearms regulation follow a general patter. New gun regulations are not enacted at the time that firearm technologies are invented or conceived. Rather, they are enacted when those technologies circulate sufficiently in society to present a public safety concern. Spitzer Rpt. ¶ 27.
84. There were few restrictions on firearms from the colonial period to the start of the Revolution because homicide rates were low. When homicides did occur, guns were seldom used, largely due to the time involved loading them, their unreliability, and (especially for pistols) their inaccuracy. Spitzer Rpt. ¶ 78.; Roth Rpt. ¶¶ 16-17.
85. In the 1800s, states and cities enacted regulations on every aspect of the manufacture, sale, and storage of gunpowder due to the substance's dangerous potential to detonate if exposed to fire or heat. Cornell Rpt. at 30. Indeed, early American governments recognized the danger posed by gunpowder and multiple states passed laws delegating authority to local governments to regulate the sale of gunpowder for public safety. Cornell Rpt. at 31.
86. Specific crime-related concerns that involved dangerous weapons led to legislative enactments in the late 1700s and early 1800s. Between 1780 and 1809, at least four states enacted measures that increased the penalties for burglaries or other crimes if the perpetrators were armed, at least three states enacted laws to punish the discharge of firearms near populated areas, and at least four states criminalized public arms carrying. Spitzer Rpt. ¶ 59.
87. As early as 1771, New Jersey and other states banned or heavily regulated trap guns, which were often used to defend the user's property but posed a public safety problem because they sometimes killed or hurt innocent people. At least 18 states enacted anti-trap gun laws between the 1700s and early 1900s. Spitzer Rpt. ¶¶ 79-82 & Exs. B, F.

88. In the 18th and 19th Centuries, every state in the nation had laws restricting dangerous weapons such as clubs, knives, slungshots, bludgeons, sandbags, and pistols, which were widely used for criminal purposes. Spitzer Rpt. ¶¶ 70-74, 76-77 & Ex. C.
89. In the 1800s, the government started to regulate the firearms industry to prevent sub-standard weapons from being sold, as well as from military weapons being diverted from the militia. Cornell Rpt. at 20.
90. Starting in the 1830s, most, if not all, states in the country enacted laws that barred or restricted the carrying or possession of Bowie knives, which were intended for combat and became associated with criminal use and dueling. Spitzer Rpt. ¶¶ 61, 67; *see also id.* Ex. H.
91. Forty-three states enacted anti-slungshot laws in the 19th Century. Overall, 71 anti-slungshot laws were enacted in the 19th Century and 12 were enacted in the 20th Century. Spitzer Rpt. ¶¶ 74, 76; *see also id.* Ex. C.
92. In the late 1800s and early 1900s several states effectively barred possession of certain weapons outright. Spitzer Rpt. ¶ 45. For example, an 1837 Georgia law made it a crime to sell, offer to sell, keep, or have Bowie knives. Spitzer Rpt. ¶ 67 & Ex. E; Roth Rpt. ¶ 31. And as early as 1850, Massachusetts banned the manufacture and sale of slung shots. Spitzer Rpt. Ex. E.
93. States also targeted easily concealed pistols during America's gun violence crisis in the Jacksonian era for regulation, reflecting concerns that these firearms were dangerous or capable of provoking terror. Cornell Rpt. at 35.
94. In the post-Civil War period, the rise in the circulation of multi-shot handguns in society, such as the Colt revolver, contributed to escalating interpersonal violence and was accompanied by the rapid spread of concealed carry restrictions. By the end of the 19th Century, virtually every state in the country prohibited or severely restricted concealed gun and other weapons carrying. Spitzer Rpt. ¶ 45; DeLay Rpt. ¶ 70.
95. During Reconstruction, Republican-dominated legislatures in the South enacted a range of racially-neutral gun regulations in response to violence directed against African Americans including by white supremacist groups. Cornell Rpt. at 39-40.

96. The slow-load lever-action firearms of the 19th Century did not attract regulatory attention at that time and would not be banned under the challenged New Jersey laws today. DeLay Rpt. ¶¶ 73-74.
97. Before the early 1920s, automatic weapons were unregulated because they did not exist or were not circulating widely in society. Spitzer Rpt. ¶ 8.
98. Criminals and terrorists began adopting machine guns and submachine guns starting in the 1920s. Roth Rpt. ¶¶ 53-54.
99. In the early 20th Century, legislatures responded to the risks that fully automatic and semiautomatic firearms posed to public safety by restricting their sale, possession, and manufacture. Roth Rpt. ¶ 56. Once they circulated appreciably in society and became associated with criminal activity, states began to restrict their sale, manufacturing, and possession. DeLay Rpt. ¶ 82; Spitzer Rpt. ¶ 6, 11-15, 45; Cornell Rpt. at 35-36. Some jurisdictions also prohibited large-capacity semi-automatic weapons. Spitzer Rpt. Ex. D.
100. Beginning in the 20th Century, ten states plus the District of Columbia regulated semi-automatic and fully automatic weapons; eleven states regulated fully automatic weapons only, where the regulation was defined by the number of rounds that could be fired without reloading or by the ability to receive ammunition feeding devices; and four states restricted all guns that could receive any type of ammunition feeding mechanism or round feeding device and fire them continuously in a fully automatic manner. Spitzer Rpt. ¶ 24. In total, at least twenty-three states enacted twenty-six gun restrictions based on the regulation of ammunition magazines or similar feeding devices, and/or round capacity between 1917 and 1934. Spitzer Rpt. ¶¶ 24-25. *See also* DeLay Rpt. ¶ 84 (describing 20th Century restrictions on semi-automatic firearms and magazine capacity).
101. Congress enacted a machine gun ban for the District of Columbia in 1932 which defined a machine gun as “any firearm which shoots automatically or semi-automatically more than twelve shots without reloading.” The National Rifle Association endorsed the law and encouraged it to be used as a guide for other states. Spitzer Rpt. ¶ 16.
102. In 1934, Congress enacted the National Firearms Act, which strictly regulated fully automatic weapons. Spitzer Rpt. ¶ 17. During the same time period, at least seven states plus the District of Columbia enacted laws restricting semi-automatic weapons. Spitzer Rpt. ¶ 21.

103. Congress passed the National Firearms Acts of 1934 and 1938 in response to the use of machine guns and submachine guns in notorious killings. Roth Rpt. ¶¶ 53-56.
104. In passing the National Firearms Acts of 1934 and 1938, Congress placed restrictions on the ownership of machine guns and submachine guns based on their ability to fire rapidly from magazines capable of holding more than 10 rounds. Roth Rpt. ¶¶ 55-56.
105. None of the federal laws regulating machine guns, automatic weapons, silencers, certain ammunition and large-caliber weapons, or destructive devices such as grenades and artillery have ever applied to the U.S. military. DeLay Rpt. ¶ 94. *See also* Spitzer Rpt. ¶ 17.
106. Removable magazines were not subject to regulation before the early 20th Century because those that did exist were rare and had not played any appreciable role in creating civil disorder. Spitzer Rpt. ¶ 23.

History of Firearms-Related Homicides

107. Levels of interpersonal gun violence among those of white European ancestry in the era of the Second Amendment were relatively low compared to modern America. Cornell Rpt. at 17-18.
108. In the colonial era leading up to the Revolutionary War, homicides among colonists were rare. Roth Rpt. ¶¶ 17-18.
109. In the colonial era, the proportion of homicides committed with firearms was no greater than 15 percent. Roth Rpt. ¶¶ 18, 20.
110. The vast majority of muzzle-loading firearms available in the colonial era, such as muskets and fowling pieces, needed to be reloaded manually after every shot. Roth Rpt. ¶ 19.
111. Reloading one of the muzzle-loading firearms available in the colonial era took at least half a minute to complete. Roth Rpt. ¶ 19.
112. The muzzle-loading firearms of the colonial era, such as muskets and fowling pieces, were liable to misfire. Roth Rpt. ¶ 19.
113. In the colonial era, most owners of muzzle-loaded firearms stored their guns empty and loaded them anew before every use. Roth Rpt. ¶ 19; Cornell Rpt. at

18. Due to the preference for storing these weapons unloaded, they posed fewer dangers to children from accidental discharges. Cornell Rpt. at 18.
114. The rates of homicides of European Americans in the colonies by unrelated adults rose during the Revolutionary War period. Roth Rpt. ¶¶ 23-24.
115. Following the end of the Revolutionary War, homicide rates fell across New England, the Mid-Atlantic states, and the settled Midwest. Roth Rpt. ¶¶ 23-24.
116. Following the end of the Revolutionary War, the proportion of homicides committed with firearms was between 0 and 10 percent. Roth Rpt. ¶ 24.
117. In the colonial era, firearm use was generally limited to hunting, controlling vermin, or serving in the militia. Roth Rpt. ¶¶ 18, 26.
118. In the Founding era, there was little interest among public officials in northern states in restricting the use of firearms, with the exception of placing restrictions on dueling. Roth Rpt. ¶ 26.
119. In the slave states during the Founding era, the proportion of homicides committed with firearms increased to between one-third and two-fifths. Roth Rpt. ¶ 27.
120. Pistols that started to become commercially available in the early 1800s could be kept loaded and carried for longer amounts of time without risk of corrosion than the firearms that were prevalent in the colonial era. Roth Rpt. ¶ 29.
121. Pistols and revolvers contributed to a sharp increase in the proportion of homicides committed with firearms at the end of the 19th Century. Roth Rpt. ¶¶ 30-40.
122. States that imposed restrictions on carrying certain concealed weapons in the 19th Century were responding to concealable weapons contributing to rising crime rates. Roth Rpt. ¶¶ 30-33.
123. States that imposed restrictions on carrying certain concealed weapons in the 19th Century were responding to technological advances that enabled firearms to fire multiple rounds in succession without reloading. Roth Rpt. ¶ 33.
124. In the mid-1800s, homicide rates rose across the United States. Roth Rpt. ¶¶ 34, 35.

125. Economic transformation was accompanied by profound social changes that gave rise to America's first gun violence crisis. As cheaper, more dependable, and easily concealable handguns proliferated, Americans, particularly southerners, began sporting them regularly. Cornell Rpt. at 24.
126. From the Mexican War through Reconstruction, the proportion of homicides committed with firearms increased. Roth Rpt. ¶ 35.
127. Once pistols and revolvers became commercially available in the mid-19th Century, they began to displace the single-shot guns prevalent in the early 1800s. Roth Rpt. ¶¶ 33-40.
128. The pistols and revolvers that became commercially available in the mid-19th Century could be fired multiple times before having to reload. Roth Rpt. ¶¶ 37-38.
129. Once single-shot guns began to be displaced by breech-loading firearms in the mid-19th Century, the proportion of homicides committed with firearms increased even in periods when overall homicide rates temporarily fell. Roth Rpt. ¶ 40.
130. By the 1920s, the proportion of homicides committed with firearms reached a median of 56% in New England and over 70% in the South and West. Roth Rpt. ¶ 40.
131. In the Reconstruction era, state legislators understood that placing restrictions on the carrying and/or possession of certain weapons was within states' constitutional authority. Roth Rpt. ¶¶ 40-46.
132. In response to Reconstruction-era violence directed against African Americans, Republican-dominated legislatures in the Reconstruction South passed a range of racially neutral gun regulations to protect individuals from gun violence. Cornell Rpt. at 39-40.
133. Incidents in which a single person killed four or more persons using firearms were rare, if not non-existent, in the colonial, Founding or Reconstruction eras. Roth Rpt. ¶¶ 47-48; Vannella Decl. Ex. 9, Rpt. of Professor Louis Klarevas ¶ 19.
134. Firearms were used in approximately two fifths of homicides between unrelated white people before the Civil War era, and in approximately four fifths of all homicides in 2021. DeLay Rpt. ¶ 37.

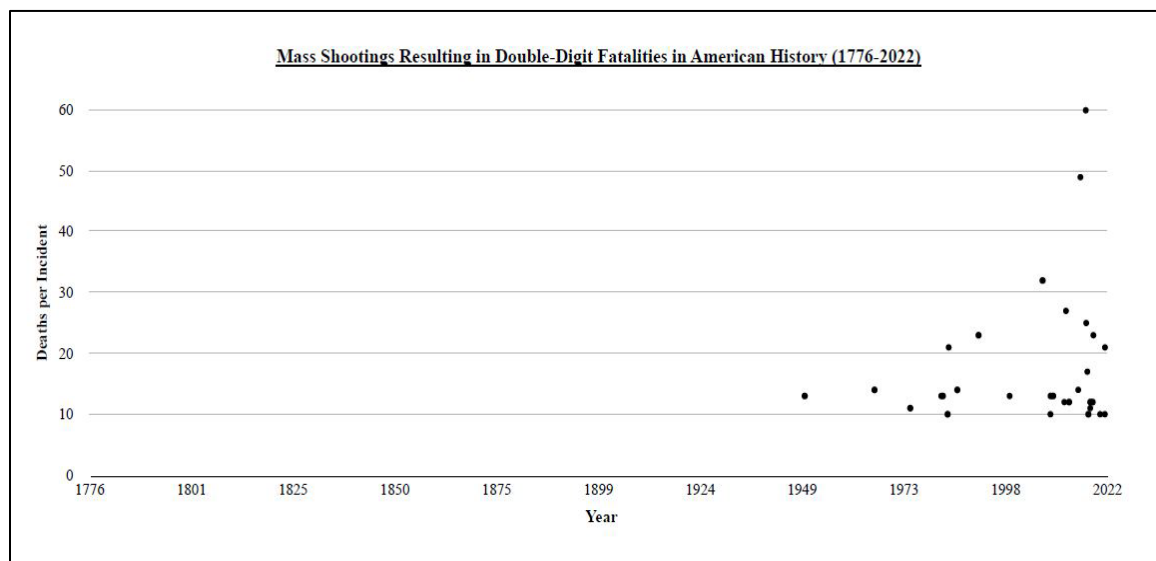
135. In the 1980s, the introduction of semi-automatic handguns into the criminal market led to a dramatic increase in criminal firepower. This resulted in more gun crimes and homicides with no corresponding increase in non-gun homicides. Spitzer Rpt. ¶ 83.

Mass Shootings – General

136. From the colonial era through the end of the 19th Century, mass killings were predominantly committed by a group of people. Roth Rpt. ¶¶ 47-50.

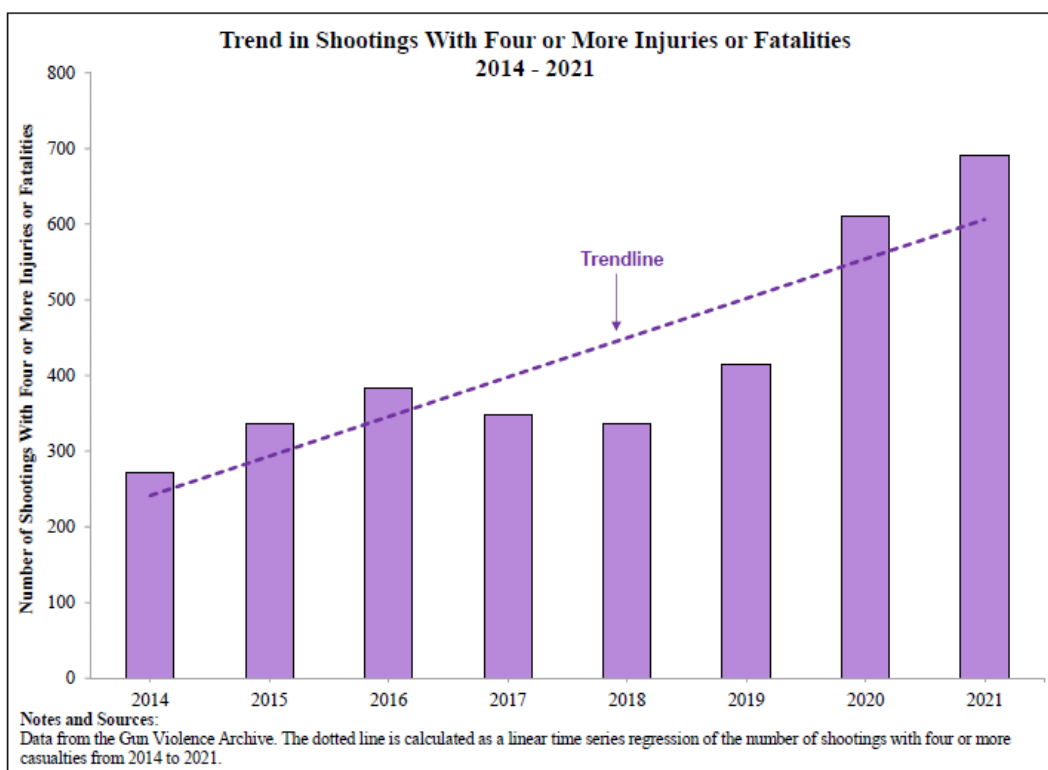
137. There is no known occurrence of a mass shooting resulting in double-digit fatalities during the 173-year period between the nation's founding in 1776 and 1948. The first known mass shooting resulting in 10 or more deaths occurred in 1949. For 70% of its 247-year existence as a nation, the United States did not experience a single mass shooting resulting in double-digit fatalities. Klarevas Rpt. ¶ 19.

138. After the first such incident in 1949, 17 years passed until a similar mass shooting occurred in 1966. The third such mass shooting then occurred nine years later, in 1975. And the fourth such incident occurred seven years after, in 1982. Klarevas Rpt. ¶ 20.



139. The distribution of double-digit-fatality mass shootings changes in the early 1980s, when five such events took place in a span of just five years. Klarevas Rpt. ¶ 21.

140. This timeframe also reflects the first time that assault weapons were used to perpetrate mass shootings resulting in 10 or more deaths: the 1982 Wilkes-Barre, PA, massacre (involving an AR-15 rifle and resulting in 13 deaths) and the 1984 San Ysidro, CA, massacre (involving an Uzi pistol and resulting in 21 deaths). Klarevas Rpt. ¶ 21.
141. In the 20-year period between 1987-2007, only two double-digit-fatality mass shootings occurred. Klarevas Rpt. ¶ 21.
142. Between 1987 and 2007, three federal measures were in effect: the 1986 Firearm Owners Protection Act, the 1989 C.F.R. “sporting use” importation restrictions, and the 1994 Federal Assault Weapons Ban. Klarevas Rpt. ¶ 21.
143. A broader dataset of shooting incidents from the Gun Violence Archive shows that shooting events with four or more injuries or fatalities has been increasing from 2014 to 2021. Vannella Decl. Ex. 7, Rpt. of Lucy Allen ¶ 41.



144. The 7 deadliest acts of intentional criminal violence in the U.S. since September 11, 2011 have all been mass shootings. Klarevas Rpt. ¶ 12. Perpetrators in all 7 employed LCMs, and 6 of the 7 used assault weapons. Klarevas Rpt. ¶ 15.

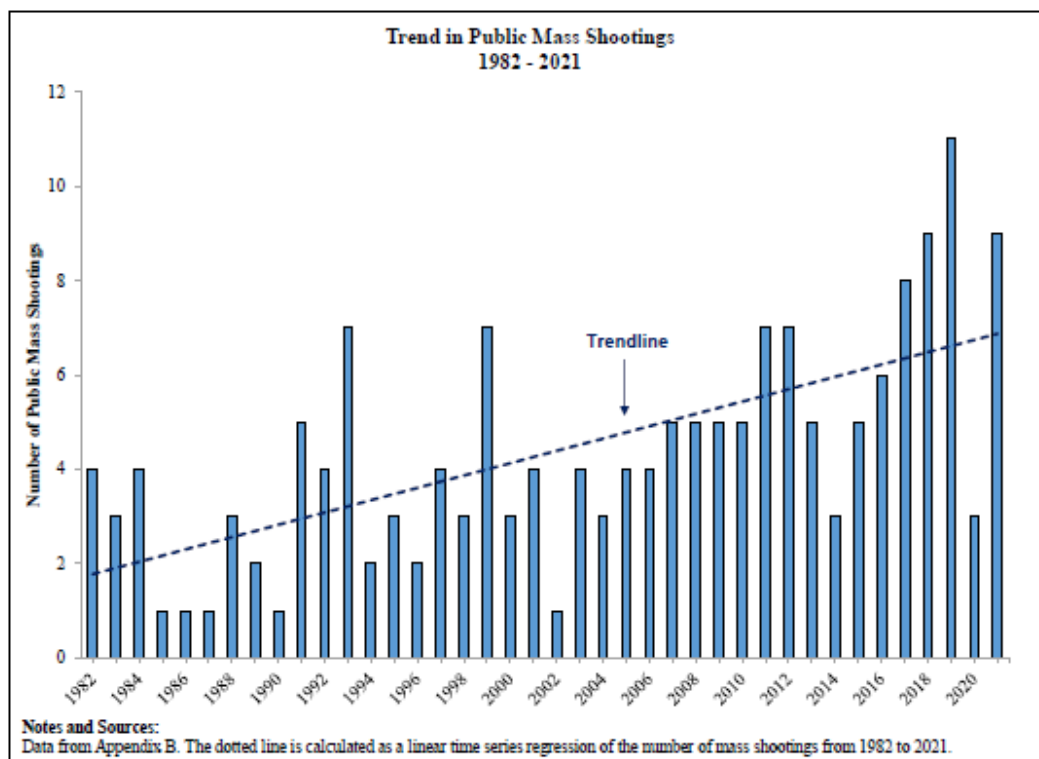
Table 2. The Use of Assault Weapons and LCMs in the Deadliest Acts of Intentional Criminal Violence in the U.S. since 9/11

Deaths	Date	Location	Involved Assault Weapons	Involved LCMs (> 10 Rounds)
60	10/1/2017	Las Vegas, NV	✓ (AR-15)	✓
49	6/12/2016	Orlando, FL	✓ (AR-15)	✓
32	4/16/2007	Blacksburg, VA		✓
27	12/14/2012	Newtown, CT	✓ (AR-15)	✓
25	11/5/2017	Sutherland Springs, TX	✓ (AR-15)	✓
23	8/3/2019	El Paso, TX	✓ (AK-47)	✓
21	5/24/2022	Uvalde, TX	✓ (AR-15)	✓

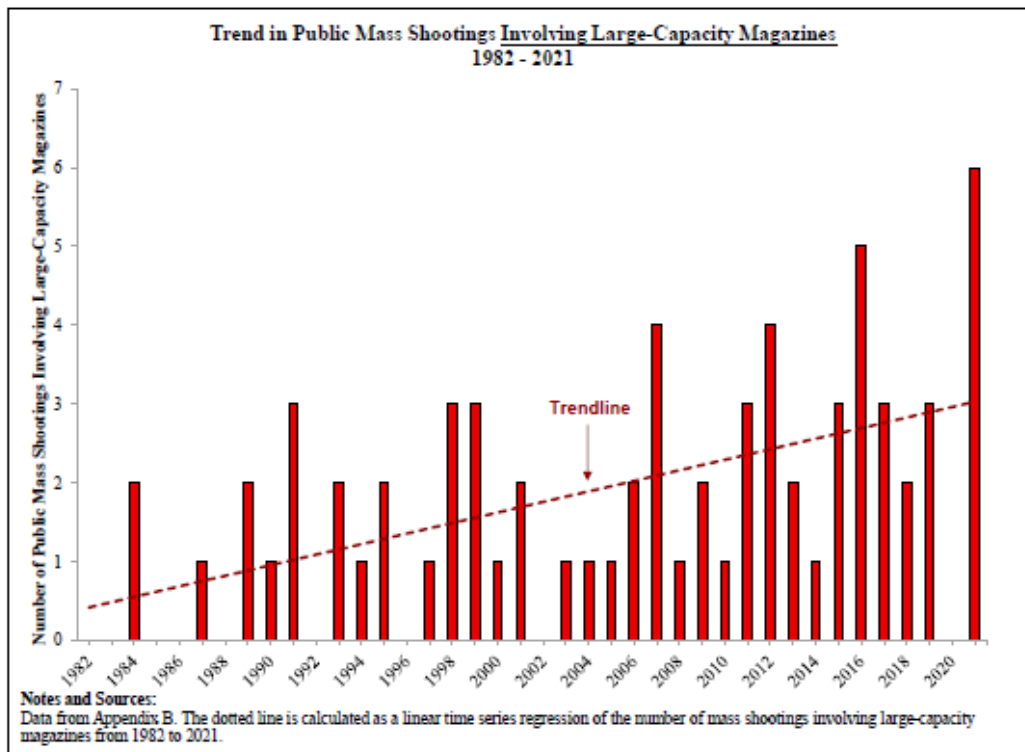
145. Assault firearms with large-capacity magazines inflicted significant damage in recent mass shootings at the Pulse Nightclub in 2016 (49 fatalities, 50+ wounded), Las Vegas in 2017 (60 fatalities, 400+ wounded), the Uvalde, Texas school shooting in 2022 (21 fatalities, 17 wounded), and the July 4th Highland Park shooting in 2022 (7 fatalities, 48 wounded). Yurgealitis Rpt. ¶ 5. Assault firearms are capable of inflicting significant carnage upon civilians in a short period of time, especially in conjunction with large capacity magazines. Yurgealitis Rpt. ¶ 5.
146. All but four mass shootings that have occurred in the United States since 1965 involved a single shooter. Roth Rpt. ¶ 67.
147. The four mass shootings in the United States since 1965 that involved more than one shooter were each committed by two assailants. Roth Rpt. ¶ 67.
148. The availability of semiautomatic weapons and magazines that hold more than 10 rounds has made it possible for one or two individuals to kill or wound a large number of people in a short amount of time. Roth Rpt. ¶¶ 50, 67-68.
149. The availability of semiautomatic weapons and magazines that hold more than 10 rounds has made it possible for a single shooter to commit mass murder without rallying collaborators around a common cause. Roth Rpt. ¶¶ 47, 68.
150. In the 2011 mass shooting in which U.S. House Representative Gabby Giffords was wounded, the shooter fired 31 rounds with a Glock 19

semiautomatic handgun before he was disarmed by bystanders while changing magazines; each of the 31 rounds fired struck an individual. Roth Rpt. ¶ 69.

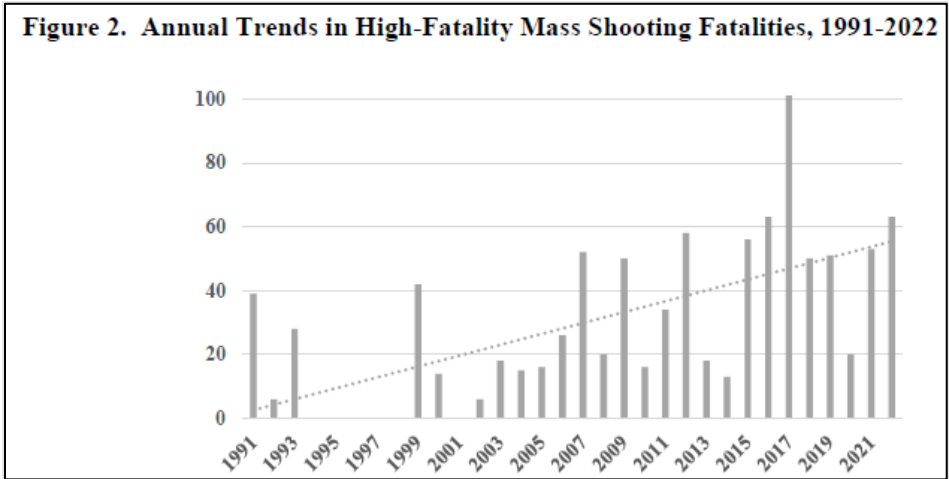
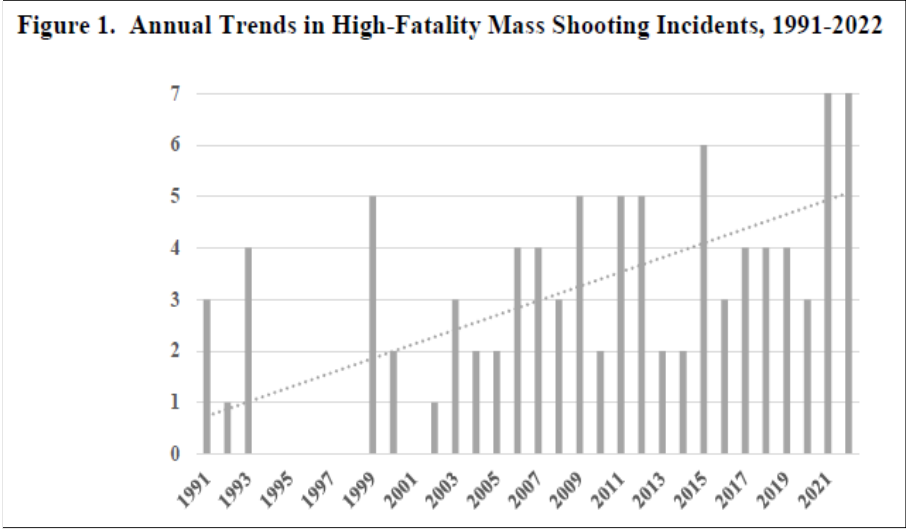
151. Lucy Allen performed a 2023 study of public mass shootings was conducted using data from four sources: Mother Jones, the Citizens Crime Commission of New York City, the Washington Post, and the Violence Project (the latter two of which began publishing data in 2018-2019). Each source defines mass shooting as one where four or more people were killed in a public place in one incident, excluding incidents related to other crimes such as robberies and domestic violence). The combined data spanned 1982 to October 2022, which yielded 179 mass shooting events. Allen Rpt. ¶¶ 25-29.
152. The Allen 2023 study shows the number of mass shooting events has been increasing, from 1982 to 2022. Allen Rpt. ¶ 39.



153. The Allen 2023 study shows the number of mass shooting events with large-capacity magazines has been increasing, from 1982 to 2022. Allen Rpt. ¶ 40.



154. From 1991 to 2022, both the number of high-fatality mass shooting incidents and number of mass shooting fatalities have grown significantly. Klarevas Rpt. ¶ 12.



Use of Assault Weapons and LCMs in Mass Shootings

155. There is evidence that the design features of assault weapons and LCMs make them especially appealing to criminals and to those who commit mass shootings. Data on 15 mass shootings from 1984 to 1993 compiled by Gary Kleck (1997) revealed six (40%) involved assault weapons or other firearms equipped with LCMs. Vannella Decl. Ex. 10, Rpt. of Professor Daniel Webster ¶ 9.
156. The rate at which assault weapons are used to commit gun massacres far outpaces the rate at which they are owned in the United States. Klarevas Rpt. ¶ 14.
157. **Percentage of mass shootings perpetrated with AWs or LCMs.** Within the Allen 2023 dataset discussed above, there were 153 mass shooting events for which it was known if an assault weapon was used. Of those 153 mass shootings, an assault weapon was used in 36 of them (24%). In the same dataset, there were 115 mass shooting events for which magazine capacity was known. Out of those 115 events, there were 73 where the perpetrator used large-capacity magazines (63%). Allen Rpt. ¶¶ 30-31.
158. Of the 179 mass shooting incidents examined in the Allen 2023 Study, whether the guns used were obtained legally was known in 112 of them. In those 112 mass shootings, shooters in 89 (79%) of them obtained their guns legally. Even if one assumed the guns were illegally obtained in the 67 incidents for which legal purchase status of the gun used was not known, 50% of the mass shootings were still done with guns obtained legally (89 out of 179). Allen Rpt. ¶ 38.
159. In the Allen 2023 Study, 80% of the guns used in mass shooting events for which it was known whether the guns were legally obtained (202 out of 252 guns) were obtained legally. Allen Rpt. ¶ 38.

160. **Average number of shots by perpetrator (AWs).** Of the 36 events involving assault weapons in the Allen 2023 study data, there are 24 in which the number of shots fired is known. Shooters fired more than 10 rounds in each of the 24 incidents. The average number of shots fired was 149. By contrast, the average number of shots fired in mass shootings without an assault weapon was 38. Allen Rpt. ¶ 36.
161. **Average number of shots by perpetrator (LCMs).** Of the 73 incidents known to have involved a large-capacity magazine in the Allen 2023 study data, there are 49 in which the number of shots fired is known. Shooters fired more than 10 rounds in 46 of the 49 incidents. The average number of shots fired was 99. In contrast, the average number of shots fired in mass shootings without large-capacity magazines was 16. Allen Rpt. ¶ 37.
162. **Comparative casualties.** Within the Allen 2023 dataset, the average number of fatalities was 12 per mass shooting with an assault weapon versus 6 for those without an assault weapon. The average number of fatalities was 10 per mass shooting with large-capacity magazines versus 6 for those without large-capacity magazines. The average number of fatalities was 13 per mass shooting with both assault weapons and large-capacity magazines versus 6 for those with neither. Allen Rpt. ¶¶ 32-34.

163. Within the Allen 2023 dataset, the average number of injuries or fatalities was 36 per mass shooting with an assault weapon versus 10 for those without an assault weapon. The average number of injuries or fatalities was 25 per mass shooting with large-capacity magazines versus 9 for those without large-capacity magazines. The average number of injuries or fatalities was 40 per mass shooting with both assault weapons and large-capacity magazines versus 8 for those with neither. Allen Rpt. ¶¶ 32-34.

Numbers of Fatalities and Injuries in Public Mass Shootings 1982 - October 2022				
Weapon Used	# of Incidents	Average # of		
		Fatalities	Injuries	Total
Assault Weapon	36	12	24	36
No Assault Weapon	117	6	4	10
Unknown	26	5	3	9
Large-Cap. Mag.	73	10	16	25
No Large-Cap. Mag.	42	6	3	9
Unknown	64	5	3	7
Assault Weapon & Large-Cap. Mag.	31	13	27	40
Large-Cap. Mag. Only ¹	36	8	7	15
No Assault Weapon or Large-Cap. Mag. ²	41	6	3	8
Unknown ³	71	5	3	8

Notes and Sources:
 Casualty figures exclude the shooter. Assault Weapon and large-capacity magazine classification and casualties updated based on review of stories from Factiva/Google searches.
¹ Shootings involving large-capacity magazine and no Assault Weapon.
² Shootings involving neither a large-capacity magazine nor Assault Weapon.
³ Shootings where it is either unknown whether a large-capacity magazine was involved or unknown whether an Assault Weapon was involved.

164. A study by Christopher Koper in 2014 showed that between 1982 and 2012, mass shootings (defined as shootings with four or more victim fatalities) committed with assault weapons caused more fatalities per incident than mass shootings committed with other firearms (a mean of 10.4 fatalities with assault weapons vs. 7.4 fatalities with other firearms) and caused non-fatal gunshot wounds to more people (a mean of 13.5 people with non-fatal gunshot wounds in mass shootings with assault weapons vs. 6.4 without). Webster Rpt. ¶¶ 9, 11.

165. A study by Luke Dillon in 2013 showed that mass shootings (defined as shootings with four or more victim fatalities) committed with firearms with LCMs had 60% more fatalities on average than those committed with firearms without LCMs (a mean of 10.19 fatalities vs. 6.35) and had more than 3 times as many victims with non-fatal gunshot wounds (a mean of 12.39 people with non-fatal gunshot wounds in mass shootings with LCMs vs. 3.55 without LCMs). Webster Rpt. ¶ 11.
166. The Allen 2023 study results are consistent with those of other studies that have analyzed mass shootings, each of which show that the average number of casualties (whether defined as injuries and fatalities or fatalities alone) were higher in mass shooting events where the perpetrator used large-capacity magazines. Allen Rpt. ¶ 35; Roth Rpt. ¶¶ 64-66.

Comparison of Studies on the Use of Large-Capacity Magazines in Mass Shootings						
Source	# Victims	Criteria Other Criteria	Time Period	# of Incidents	Avg. # of Fatalities + Injuries / Fatalities	
(1)	(2)	(3)	(4)	(5)	With LCM	Without LCM
Allen (2023) ¹	at least 4	Includes shootings "in a public place in one incident, and exclude[s] incidents involving other criminal activity such as a robbery"	1982-October 2022	179	25 / 10	9 / 6
Allen (2020) ²	killed ³		1982-2019	161	27 / 10	9 / 6
Kleck et al. (2016) ⁴	more than 6 shot	Excludes "spree shootings" and includes shootings in both "public" and "private" places	1994-2013	88	21 / n/a	8 / n/a
Klarevas et al. (2019) ⁵	at least 6 killed ³	Includes "intentional crimes of gun violence"	1990-2017	69	n/a / 12	n/a / 7
Koper et al. (2018) ⁶	at least 4 killed ³	Includes shootings in both public and private places	2009-2015	145	14 / n/a	5 / n/a

Notes and Sources:

¹ Exhibit B of this report.

² Declaration of Lucy P. Allen in Support of Defendants' Opposition to Motion for Preliminary Injunction in *James Miller et al. v. Xavier Becerra et al.*, dated January 23, 2020.

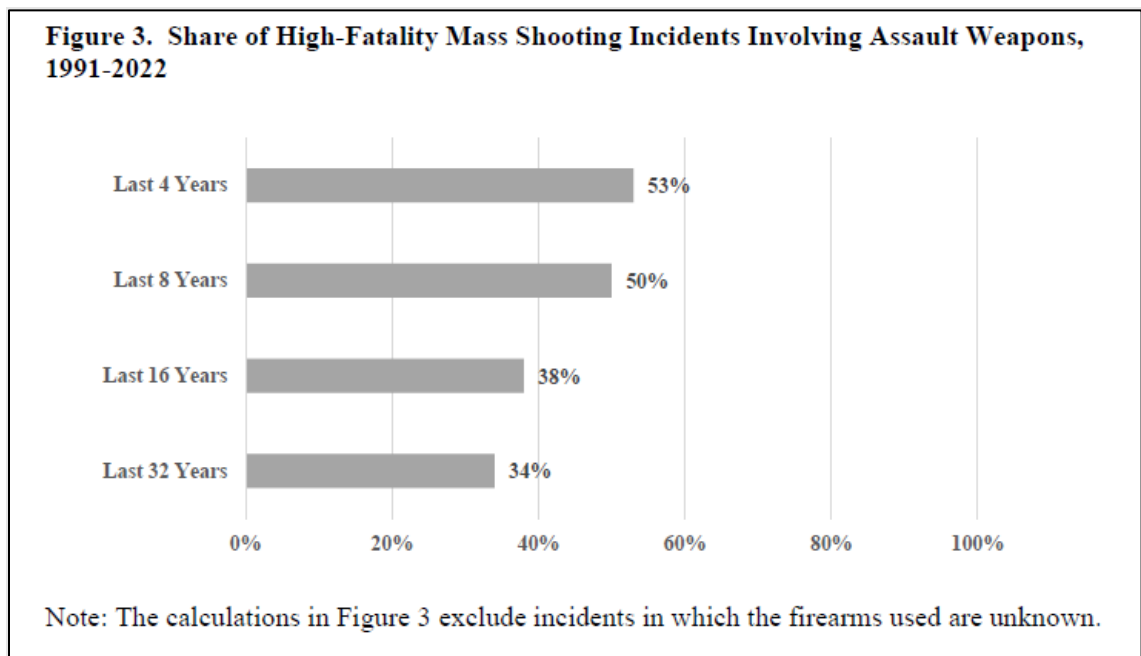
³ Excluding shooter.

⁴ Kleck, Gary, "Large-Capacity Magazines and the Casualty Counts in Mass Shootings: The Plausibility of Linkages," 17 Justice Research and Policy 28 (2016).

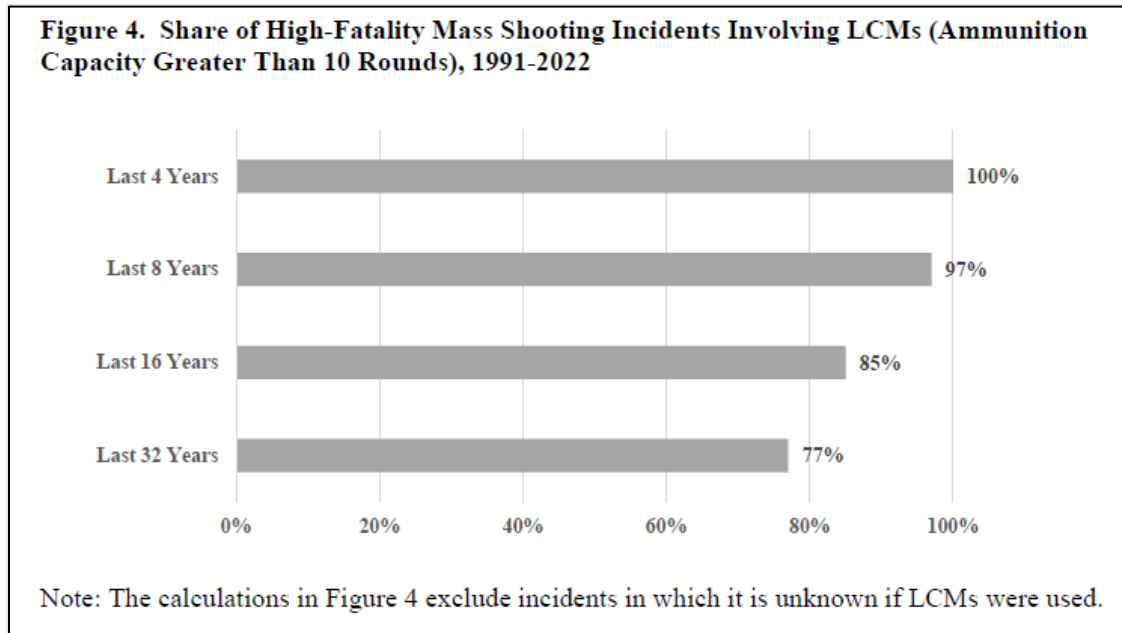
⁵ Klarevas et al., "The Effect of Large-Capacity Magazine Bans on High-Fatality Mass Shootings 1990-2017," American Journal of Public Health (2019).

⁶ Koper et al., "Criminal Use of Assault Weapons and High-Capacity Semiautomatic Firearms: an Updated Examination of Local and National Sources," Journal of Urban Health (2018). Note that the Koper et al study includes shootings involving both LCM and assault weapons.

167. **High Fatality Mass Shootings – AWs.** Focusing on high-fatality mass shootings in particular (defined as events resulting in 6 or more victims being shot to death), an analysis of such events by Prof. Klarevas (based on a dataset that Prof. Klarevas maintains and continuously updates, which is reproduced at Exhibit C to his report) between 1991 and 2022, where the weapon used was known, showed that the percentage of such shootings where the perpetrator employed an assault weapon has increased over time. The overall rate of use of assault weapons in such high fatality mass shootings is 34%, but rose to 53% over the past 4 years. Klarevas Rpt. ¶ 13.



168. **High Fatality Mass Shootings – LCMs.** Of the high fatality mass shootings between 1991 and 2022 where magazine capacity used was known, the percentage of such shootings where the perpetrator employed a large-capacity magazine (with greater than 10 rounds of capacity) has increased. The overall rate of use of LCMs in such high fatality mass shootings is 77%, but rose to 100% over the past 4 years. Klarevas Rpt. ¶ 13.



169. **High Fatality Mass Shootings – Lethality.** There is a positive association between the lethality of mass shootings and the use of assault weapons and LCMs. The average death toll for high-fatality mass shootings involving assault weapons was 13.7 fatalities per shooting. By contrast, the average death toll for high-fatality mass shootings without assault weapons was 8.2 fatalities per shooting. The average death toll for high-fatality mass shootings involving LCMs was 11.5 fatalities per shooting. By contrast, the average death toll for high-fatality mass shootings without LCMs was 7.3 fatalities per shooting. Klarevas Rpt. ¶15, 16.

Table 3. The Average Death Tolls Associated with the Use of Assault Weapons in High-Fatality Mass Shootings in the U.S., 1991-2022

	Average Death Toll for Incidents That Did Not Involve the Use of Assault Weapons	Average Death Toll for Incidents That Did Involve the Use of Assault Weapons	Percent Increase in Average Death Toll Associated with the Use of Assault Weapons
1991-2022	8.2 Deaths	13.7 Deaths	67%

Note: The calculations in Table 3 exclude incidents in which the firearms used are unknown.

Table 4. The Average Death Tolls Associated with the Use of LCMs (Ammunition Capacity Greater Than 10 Rounds) in High-Fatality Mass Shootings in the U.S., 1991-2022

	Average Death Toll for Incidents That Did Not Involve the Use of LCMs	Average Death Toll for Incidents That Did Involve the Use of LCMs	Percent Increase in Average Death Toll Associated with the Use of LCMs
1991-2022	7.3 Deaths	11.5 Deaths	58%

Note: The calculations in Table 4 exclude incidents in which it is unknown if LCMs were used.

170. Use of LCMs with assault weapons in high-fatality mass shootings resulted in a 92% increase in the average death toll compared to high-fatality mass shootings involving neither instrument. Klarevas Rpt. ¶ 17.

Table 5. The Average Death Tolls Associated with the Use of LCMs (Ammunition Capacity Greater Than 10 Rounds) and Assault Weapons in High-Fatality Mass Shootings in the U.S., 1991-2022

Average Death Toll for Incidents Not Involving LCMs or AWs	Average Death Toll for Incidents Involving LCMs but Not AWs	Percent Increase	Average Death Toll for Incidents Involving LCMs but Not AWs	Average Death Toll for Incidents Involving LCMs and AWs	Percent Increase	Average Death Toll for Incidents Not Involving LCMs or AWs	Average Death Toll for Incidents Involving LCMs and AWs	Percent Increase
7.3	9.2	26%	9.2	14.0	52%	7.3	14.0	92%

Note: The calculations in Table 5 exclude incidents in which it is unknown if assault weapons and/or LCMs were used.

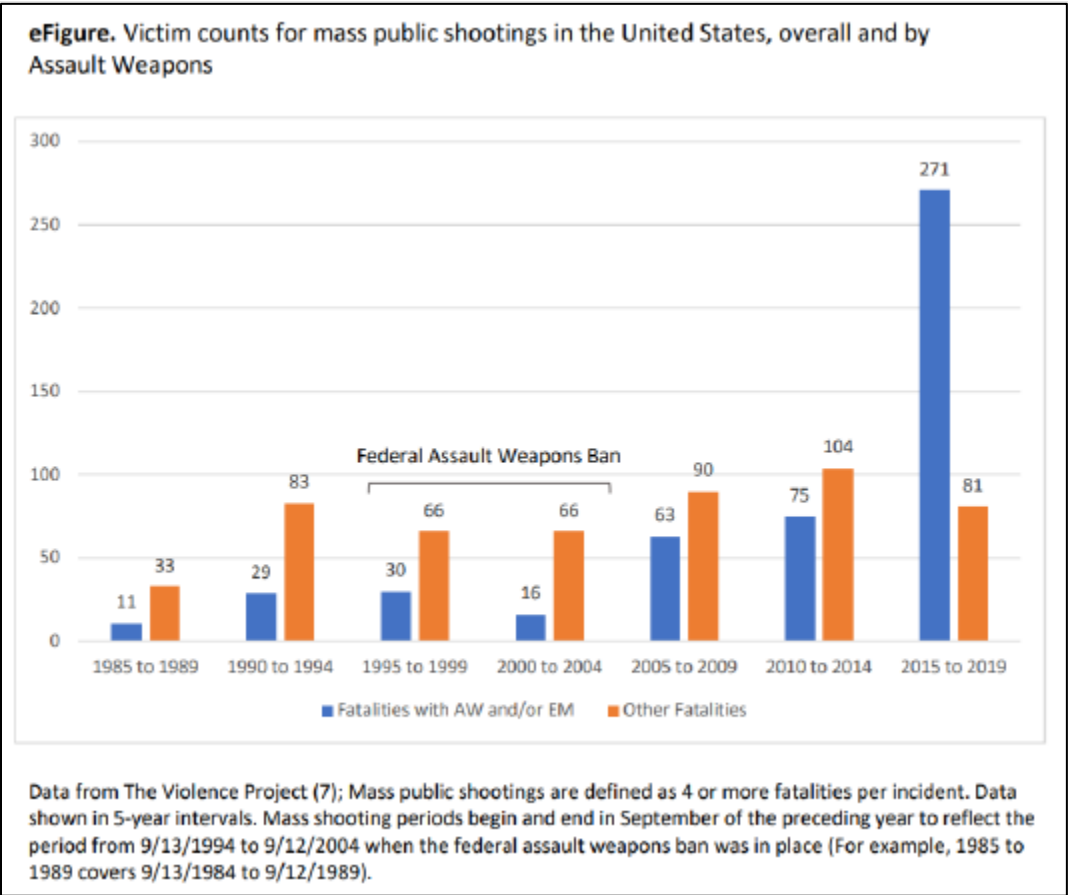
171. A 2020 study in *Criminology & Public Policy* by Webster et al found that for the period of 1984 to 2017, state bans on LCMs were associated with a 48 percent lower incidence of fatal mass shootings within those states, when compared to years in those states in which there was no LCM ban and with 70% fewer deaths from fatal mass shootings per capita. Webster Rpt. ¶ 14.
172. A 2020 study in *Law and Human Behavior* by Siegel et al found that LCM bans were also associated with significantly lower rates of fatal mass shootings. Webster Rpt. ¶ 14.
173. A 2019 study by Klarevas et al. in the *American Journal of Public Health* found that between 1990 and 2017, the incidence of fatal mass shootings (those with 6 or more victim deaths) in states without LCM bans was more than double the rate than in states with LCM bans. The annual number of deaths in non-LCM ban states was also 3 times higher. Webster Rpt. ¶ 14.
174. A 2015 study by Gius et al in *Applied Economics Letters* found statistically significant negative associations between assault weapon bans and fatalities from public mass shootings. Webster Rpt. ¶ 16.
175. A 2022 study by Cook et al. in *JAMA* found that, during the federal assault weapons ban from 1994 to 2004, fatalities from shootings with banned weapons

decreased during the second half of the ban and then surged after the ban expired. Webster Rpt. ¶ 17. A 2004 study by Koper et al. for the National Institute of Justice found a one-third reduction in the share of crime guns recovered and traced by law enforcement that were assault weapons. Webster Rpt. ¶ 15.

176. From 2015 to 2019, five of the top ten deadliest mass shootings in U.S. history occurred and each was committed with an assault weapon. Webster Rpt. ¶ 17.

177. A 2021 study in *JMIR Public Health Surveillance* by Post et al. showed that during the years the federal assault weapons ban was in place, statistical models estimated that the federal ban on assault weapons and LCMs resulted in a significant decrease in public mass shootings, number of gun deaths, and number of gun injuries during the decade the ban was in place. Those statistical models estimated that if the federal ban had continued after 2004, there would have been 30 fewer public mass shootings, 339 fewer people murdered in those shootings, and 1,139 fewer people injured in those shootings. Webster Rpt. ¶ 18.

178. The number of fatalities from mass public shootings committed with non-assault weapons has remained relatively flat. Webster Rpt. ¶ 17.



Use of Assault Weapons/ LCMs and Crime

179. The features of assault style firearms, including LCMs, are attractive to users who are most likely to use firearms in crime. Webster Rpt. ¶ 13.
180. After rapid-fire semiautomatic handguns and rifles with large capacity magazines arrived on the domestic market in the 1970s and 1980s, they were picked up by criminals, terrorists, and lone gunmen. These firearms inflict mass casualties in a matter of seconds and maintain parity with law enforcement in a standoff. Roth Rpt. ¶ 60.
181. Uniformed police officers are generally outfitted with soft body armor of a “Level II” or “Level IIIA” protection rating for the National Institute of Justice. Those ratings of body armor are suitable protection against most handgun bullets (which reach a muzzle velocity of 1200FPS (+ or -), but not against rifle caliber AR & AK type assault rifles (which reach a muzzle velocity of 3200FPS (+ or -). Yurgealitis Rpt. ¶ 156.
182. The firearms prohibited by N.J. Stat. Ann. § 39-1(w) pose a threat to overall public safety and increase the likelihood that first responders charged with stopping a threat, or attending to wounded citizens, may be injured or killed in performance of their duty. Yurgealitis Rpt. ¶ 156.
183. A study by Christopher Koper et al. in 2017 showed that across ten different cities in the United States, firearms with LCMs accounted for between 15 and 36% of firearms recovered by law enforcement between 2001 and 2014. Webster Rpt. ¶ 12.
184. Firearms with LCMs accounted for 40.6% of the firearms used to murder police nationally between 2009 and 2013, and as much as 57.4% of firearms used in mass shootings with 4 or more fatalities for the period of 2009 to 2015. Webster Rpt. ¶ 12 (citing Koper).
185. Assault weapons accounted for between 2.6 and 8.5% of firearms recovered by law-enforcement officers in the same ten cities between 2001 and 2014. Webster Rpt. ¶ 12. (citing Koper).
186. Assault weapons also accounted for 13.2% of murders of police involving firearms, and up to 35.7% of fatal mass shootings nationally between 2009 and 2015. Webster Rpt. ¶ 12. (citing Koper).

187. Assuming that assault weapons account for 3 percent of the population of firearms in civilian hands, the data discussed above indicates assault firearms and firearms with LCMs are specifically used in crime, in lethal violence against law enforcement officers, and in fatal mass shootings at percentages five to ten times higher than they would be expected to if those weapons' features played no role in whether they were used in crimes. Webster Rpt. ¶ 13.
188. A study by Wintemute et al. (1998) in *Annals of Emergency Medicine*, using data from handgun purchasers in California and subsequent crimes committed with those handguns prior to the state banning assault-style pistols found that the share of handguns purchased which were assault pistols was 2% if the purchaser had no criminal history, 4.6% if the purchaser had a history of minor criminal offenses, 6.6% for those with a previous criminal gun charge, and 10% for those who had previously been charged with two or more serious violent offenses. Webster Rpt. ¶ 13.

Self-Defense Data

189. Home defense and self-defense situations are rarely, if ever, lengthy shootouts at long ranges with extensive exchanges of gunfire. Yurgealitis Rpt. ¶ 137.
190. Based on incidents in the NRA Armed Citizen database that occurred between January 2011 and May 2017, it is extremely rare for a person, when using firearms in self-defense, to fire more than 10 rounds. Allen Rpt. ¶¶ 9-11.
191. **Average number of shots fired for self-defense – NRA Data.** Out of 736 incidents in the NRA Armed Citizen database between January 2011 and May 2017, the average number of shots fired by a person using firearms in self-defense was 2.2. Allen Rpt. ¶ 10.²
192. Indeed, in the vast majority of incidents—587 (or 79.8%)—the defender fired 1 to 5 bullets; and in 134 (or 18.2%), the defender fired no shots at all. Allen Rpt. ¶¶ 9-10.
193. Within that same dataset, only 2 incidents (0.3% of all incidents) were reported where the defender fired more than 10 bullets. In 18.2% of incidents, the defender fired zero shots. In 80% of incidents, the defender fired 1 to 5 shots. In 2% of incidents, the defender fired 6 to 10 shots. Allen Rpt. ¶ 10.

² Paragraph 11 is mislabeled as Paragraph 9. See Allen Rpt. at 6.

**Breakdown of Incidents in NRA Armed Citizen Database
by Number of Shots Fired
January 2011 - May 2017**

<u># of Shots Fired</u>	<u># of Incidents</u>	<u>% of Incidents</u>
0	134	18.2%
1-5	587	79.8%
6-10	13	1.8%
More than 10	2	0.3%

Average Number of Shots Fired: 2.2

Notes and Sources:

Data from NRA Armed Citizen database covering 736 incidents from January 2011 through May 2017. Excludes duplicate incidents, wild animal attacks and one incident where the supposed victim later pleaded guilty to covering up a murder.

194. These 2 incidents were reported in the database after Allen's initial findings were published (at which time there were zero incidents involving more than 10 shots fired). Underlying reporting of those two incidents did not indicate the defenders needed to fire more than 10 shots to defend themselves. Allen Rpt. ¶ 5, n.2.
195. The NRA database is not limited to cases of self-defense in the home, and the number of shots fired was found to be similar in incidents both inside and outside the home. Allen Rpt. ¶¶ 9, 11 n.16.
196. A separate study of the NRA database for an earlier time period, 1997 to 2001, found similar results. Specifically, that study also found that, on average, 2.2-shots were fired by defenders and that in 28% of incidents of armed citizens defending themselves the individuals fired no shots at all. Allen Rpt. ¶ 9, n.14; Yurgealitis Rpt. ¶ 147.
197. An additional study of news reports using the Factiva archive of aggregated news content from nearly 33,000 sources using keyword search criteria resulted in 35,000 stories from January 2011 to May 2017 in the United States. The search criteria matched approximately 90% of the NRA Armed Citizen database reports, and the remaining 10% showed the typical number of shots fired was no different. Allen Rpt. ¶12.
198. **Average number of shots fired for self-defense - Factiva.** Separately, a random number generator was used to sample the 35,000 news stories aggregated on Factiva between January 2011 to May 2017 that matched relevant search terms, yielding 4,800 news stories on incidents of self-defense

of a firearm in the home. A random selection of 200 such stories were analyzed. In that analysis the average number of shots fired per *story* was 2.61. Allen Rpt. ¶¶ 12-15.

199. There was a statistically significant relationship between the number of shots fired in an incident and the number of news stories covering the incident (i.e., the more shots fired, the more news stories covered the incident). A statistical calculation was performed to adjust for this effect, yielding the average number of shots fired per incident as 2.34. In 11.6% of incidents, the defender fired no shots; in 97.3% of incidents, the defender fired 5 or fewer shots. In no incidents was the defender reported to have fired more than 10 bullets. Allen Rpt. ¶¶ 15-17.

Number of Shots Fired in Self-Defense in the Home Based on Random Selection of Articles from Factiva January 2011 - May 2017	
	Incidents in the Home
Estimated population of news reports in Factiva on self-defense with a firearm in the home	4,841
Random selection of news reports	200
Average Number of Shots Fired	2.34
Median Number of Shots Fired	2.03
Number of Incidents with No Shots Fired	23
Percent of Incidents with No Shots Fired	11.6%
Number of Incidents with ≤5 Shots Fired	195
Percent of Incidents with ≤5 Shots Fired	97.3%
Number of Incidents with >10 Shots Fired	0
Percent of Incidents with >10 Shots Fired	0.0%
Notes and Sources: Based on news stories describing defensive gun use in a random selection of Factiva stories 2011 to May 2017 using search string (gun* or shot* or shoot* or fire* or arm*) and ("broke in" or "break in" or "broken into" or "breaking into" or burglar* or intrud* or inva*) and (home* or "apartment" or "property") with region set to United States and excluding duplicate stories classified as "similar." Calculated using weights reflecting the probability that a news story on a particular incident would be selected at random from the total population of news stories on incidents of self-defense with a firearm in the home.	

200. Out of almost 1,000 incidents of self-defense analyzed (736 from the NRA Armed Citizen database and 200 randomly sampled from Factiva), only 2

involved reports of more than 10 shots fired in a self-defense scenario in the home (0.2%). Because the analysis excludes incidents without news reportage, and because the fewer shots fired, the less news coverage there is, the 0.2% figure likely overestimates the overall percentage of self-defense incidents in which more than 10 rounds were used. Allen Rpt. ¶18.

201. **Percentage of rifle use for self-defense.** The Heritage Foundation maintains a “Defensive Gun Uses In the U.S.” database (DGU), with data beginning in January 1, 2019. An analysis of the 2,714 incidents in the database spanning January 1, 2019 through October 6, 2022 showed 51 incidents where a rifle was used. This represents 2% of all incidents in the database and 4% of all incidents in the database with a known gun type. After conducting the same analysis again, but excluding incidents in states that had restrictions on assault weapons, the results were 48 incidents, representing 2% and 4% of the total number of incidents, 2,499. Allen Rpt. ¶¶ 19-24.

202. **Percentage of handgun use for self-defense.** Within the same dataset, there were 1,113 incidents where a handgun was used. This represents 41% of all incidents in the database and 90% of all reported incidents with a known gun type. Allen Rpt. ¶ 23.

The Heritage Foundation Defensive Gun Uses Database			
Firearm Type	Incidents ¹	% of Total	% of Known
(1)	(2)	(3)	(4)
Handgun	1,113	41%	90%
Shotgun	78	3%	6%
Rifle	51	2%	4%
Long Gun	1	0%	0%
Pellet Rifle	1	0%	0%
Unknown	1,473	54%	
Total known:	1,241		
Total:	2,714		

Source:
 "Defensive Gun Uses in the U.S.," *The Heritage Foundation*.
 Data as of October 7, 2022.

¹ Note that three incidents are coded as having more than one firearm type and thus the sum by firearm type is larger than the total number of incidents.

203. **Assault Weapons Self-Defense Use in Active Shootings.** An analysis of FBI data of active shootings between January 1, 2000 and December 31, 2022

in the United States revealed 456 active shooter incidents, of which 18 incidents involved defensive gun use by civilians, excluding law enforcement or armed security. For this dataset, active shooter incident refers to attacks by perpetrators “in a populated area.” In 17 of the 18 incidents, the firearm used by an armed private citizen was identifiable. 14 involved handguns, 1 involved a shotgun, 1 involved a bolt-action rifle, and 1 involved an assault rifle. Thus, only 5.9% (1 of 17) cases where a firearm was used for self-defense in an active-shooter scenario involved the use of an assault weapon. Overall, only 1 out of 456 active-shooter scenarios in the last 23 years (0.2%) involved an armed civilian intervening with an assault weapon. Klarevas ¶¶ 25-26.

Historical Linguistics

204. An appropriate way to glean the original public meaning of constitutional text is to consider historical dictionaries and databases comprising real-world examples of how Americans used words between Founding and Reconstruction. Vannella Decl. Ex. 6, Rpt. of Professor Dennis Baron ¶¶ 2, 9–20.
205. Between Founding and Reconstruction, the word “arms” referred to weapons. Baron Rpt. ¶¶ 20, 29, 31(q), 32, 74.
206. During that same period, the word “arms” was used separately from the word “accoutrements,” which referred to accessories such as belts, scabbards, and cartridge boxes. Baron Rpt. ¶¶ 2(a), 23–28, 31(f), 31(l), 32, 37, 39, 42–44, 47–48, 51, 55.
207. “Cartridge boxes,” “cartridge cases,” and “cartouch cases” were phrases used during this period to describe ammunition containers. Baron Rpt. ¶¶ 3, 30, 31(i), 71.
208. The word “magazine” is currently used to describe ammunition containers, but it began to be so used only during the latter half of the 19th Century. Baron Rpt. ¶¶ 3, 21–22, 30, 31(n), 58, 67–68. For instance, the Oxford English Dictionary notes the earliest use of magazine meaning “a bullet storage container” as 1868. Baron Rpt. ¶ 3, 22, 58, 64. From that point, the word “magazine” gradually replaced the phrase “cartridge box” and the like. Baron Rpt. ¶ 68.
209. Modern magazines often feed ammunition into firearms. Baron Rpt. ¶¶ 30, 31(n), 58.

210. Historically, cartridge boxes also fed ammunition into firearms. For example, to operate the “Mitralleuse,” a French field weapon analogous to today’s machine guns, a person “fire[d] it by turning a crank” and then “removed” “the cartridge box ... from the canon” and “put a new one in.” Baron Rpt. ¶ 31(n).

211. Ammunition containers—whether cartridge boxes or magazines—were not historically understood to be “arms.” Baron Rpt. ¶¶ 2(b), 3, 22–23, 29–32, 44, 58, 64, 68, 71, 74.

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Respectfully submitted,

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